Detailed Description of a Filtered Handle System

Handle Dimensions and Materials

The total length of the handle is 40 cm, divided as follows:

15 cm for the transparent lower section made of Polycarbonate, housing the filter.

25 cm for the premium upper section, made of either opaque Polycarbonate or Stainless Steel.

Filter Cartridge Specifications

The disposable filter cartridge measures 10 cm in length, with a 7 mm internal lumen and approximately 14 mm outer diameter.

The filter features a hollow cylindrical structure with a central lumen surrounded by mesh walls, protecting internal layers and ensuring smooth airflow.

Composition of Filter Layers

Internal Filter Layers (from bottom to top)

Cotton Pre-filter – 1.5 cm: captures large particles and initial moisture.

Coarse Activated Carbon – 1.5 cm: absorbs primary odors and toxic substances.

NanoCotton / Melt-blown Filter – 1.5 cm: filters fine particles and dense smoke.

Fine Activated Carbon – 2 cm: provides additional purification of gases and deep odors.

Filter Component Functions

Bio-Ceramic Balls – 0.5 cm: regulates smoke temperature and enhances quality.

Silica + Zeolite Beads – 1 cm: dries and removes unwanted odors.

Steel Mesh + Final Cotton Pad – 1 cm: traps final particle residues before smoke reaches the mouth.

Design Enhancements for Performance

The entire filter is wrapped in a fine mesh for component protection.

Exhaust-like design improves airflow efficiency.

Internal Filter Securing Mechanism

The filter is inserted into the transparent

section of the handle and secured using dual internal grooves (Puzzle-Lock System) for precise alignment.

A 1 mm clearance between the filter and the inner wall ensures optimal airflow.

Handle Construction and Aesthetics

Upper section (25 cm): made of premium Polycarbonate (opaque black or matte gray) or Stainless Steel for a high-end metallic finish.

Lower section (15 cm): fully transparent Polycarbonate, showcasing the internal filter, and secured with a tight twist-fit system for easy assembly and disassembly.

Summary of Attributes

Key Features:

Integrated Design for Optimal Hookah Experience

The design combines luxury, high performance, and precise filter protection, ensuring smooth airflow while reducing moisture, heat, and harmful substances, in line with global premium hookah standards